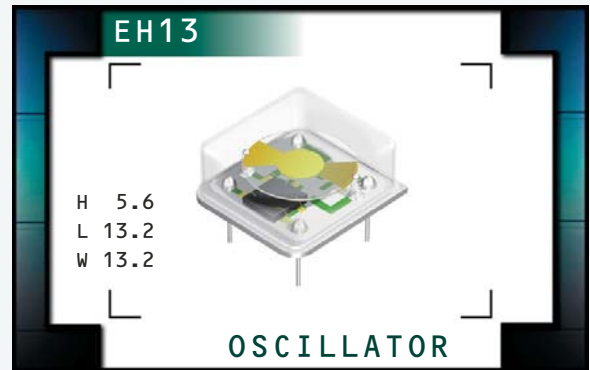


# EH13 Series



ECLIPTEK<sup>®</sup>  
CORPORATION

- RoHS Compliant (Pb-free)
- HCMOS Output
- 3.3V Supply Voltage
- 8 Pin DIP Package
- Stability to 20ppm
- Custom Lead Length and Gull Wing Options Available



## NOTES

### ELECTRICAL SPECIFICATIONS

<b>Frequency Range</b>		1.000MHz to 155.520MHz
<b>Operating Temperature Range</b>		0°C to 70°C or -40°C to 85°C
<b>Storage Temperature Range</b>		-55°C to 125°C
<b>Supply Voltage (V<sub>DD</sub>)</b>		3.3V <sub>DC</sub> ±0.3V <sub>DC</sub>
<b>Input Current</b>		35mA Maximum (Unloaded)
<b>Frequency Tolerance / Stability</b>	Inclusive of all conditions: Calibration Tolerance at 25°C, Frequency Stability over the Operating Temperature Range, Supply Voltage Change, Output Load Change, First Year Aging at 25°C, Shock, and Vibration	±100ppm, ±50ppm, ±25ppm, or ±20ppm Maximum
<b>Output Voltage Logic High (V<sub>OH</sub>)</b>		2.7V <sub>DC</sub> Minimum I <sub>OH</sub> = -8mA
<b>Output Voltage Logic Low (V<sub>OL</sub>)</b>		0.5V <sub>DC</sub> Maximum I <sub>OL</sub> = +8mA
<b>Rise Time / Fall Time</b>	≤70.000MHz 20% to 80% of Waveform w/HCMOS Load >70.000MHz 20% to 80% of Waveform w/HCMOS Load	6 nSeconds Maximum 4 nSeconds Maximum
<b>Load Drive Capability</b>	≤70.000MHz >70.000MHz	30pF HCMOS Load Maximum 15pF HCMOS Load Maximum
<b>Duty Cycle (at V<sub>DD</sub>=3.3V<sub>DC</sub>)</b>	at 50% of Waveform	50 ±10(%) (Standard) or 50 ±5(%) (Optional)
<b>Tri-State Input Voltage</b>	V <sub>IH</sub> : No Connection or ≥2.2V <sub>DC</sub> V <sub>IL</sub> : ≤0.8V <sub>DC</sub>	Enables Output Disables Output: High Impedance
<b>Aging (at 25°C)</b>		±5ppm / year Maximum
<b>Start Up Time</b>		10mSeconds Maximum
<b>Period Jitter: Absolute</b>		±250pSec Maximum, ±100pSec Typical
<b>Period Jitter: One Sigma</b>		±50pSec Maximum, ±40pSec Typical

MANUFACTURER  
ECLIPTEK CORP.

CATEGORY  
OSCILLATOR

SERIES  
EH13

PACKAGE  
8 pin DIP

VOLTAGE  
3.3V

CLASS  
OS45

REV. DATE  
08/05

## PART NUMBERING GUIDE

### EH13 00 HS ET TS - 70.000M - G TR

#### FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum (Standard)  
 45=±50ppm Maximum, 25=±25ppm Maximum  
 20=±20ppm Maximum

#### PACKAGE

HS=Half Size 8 Pin DIP

#### OPERATING TEMP. RANGE

Blank=0°C to 70°C (Standard), ET=-40°C to 85°C

#### DUTY CYCLE

Blank=50 ±10(%) (Standard), T=50 ±5(%)

#### PACKAGING OPTIONS

Blank=Bulk (Standard)  
 TR=Tape & Reel (only offered with  
 Half Size G and Half Size G2 Options)

#### AVAILABLE OPTIONS

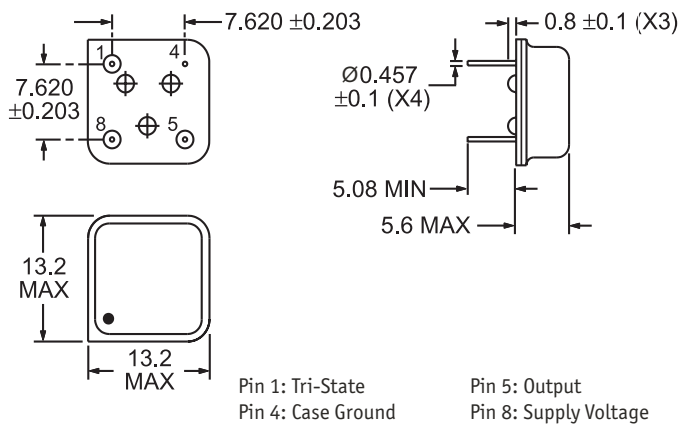
Blank=None (Standard)  
 CLXXX=Custom Lead Length (See Page 133)  
 G=Half Size Gull Wing (See Page 132)  
 G2=Half Size Gull Wing (See Page 132)

#### FREQUENCY

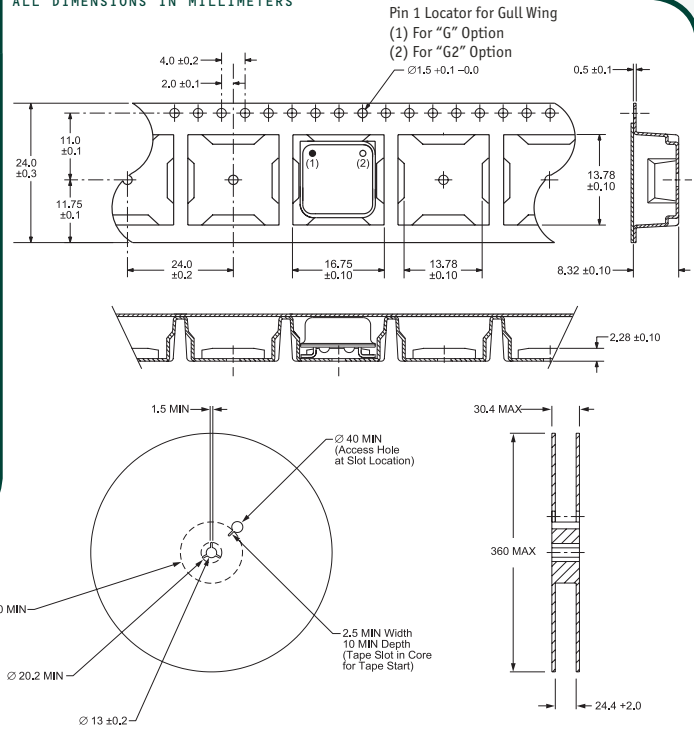
#### OUTPUT CONTROL FUNCTION

TS=Tri-State Enable High

#### MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



#### TAPE AND REEL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



#### MARKING SPECIFICATIONS

Line 1: ECLIPTEK  
 Line 2: EH13 TS — Series Designator  
 Line 3: XX.XXX M — Frequency in MHz (5 Digits Maximum + Decimal)  
 Line 4: XX Y ZZ — Week of Year, Last Digit of Year, Eclipsetek Manufacturing Identifier

Note: Pin 1 shall be designated with a dot

#### ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	Specification
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-202, Method 213, Condition C
Vibration	MIL-STD-883, Method 2007, Condition A
Lead Integrity	MIL-STD-883, Method 2004
Solderability	MIL-STD-883, Method 2002
Temperature Cycling	MIL-STD-883, Method 1010
Resistance to Soldering Heat	MIL-STD-883, Method 210
Resistance to Solvents	MIL-STD-883, Method 215

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH13	8 pin DIP	3.3V	OS45	08/05